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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,737

05/11/2007

Koji Miyajima

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EXAMINER

CUEVAS, PEDRO J

ART UNIT

PAPER NUMBER

2834

MAIL DATE

DELIVERY MODE

12/05/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/576,737	<b>Applicant(s)</b> MIYAJIMA ET AL.	
	<b>Examiner</b> PEDRO J. CUEVAS	<b>Art Unit</b> 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/21/06</u> .   | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 4-6 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only, and cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 4-6 have not been further treated on the merits.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,696,251 to Last et al.

Last et al. disclose the design and construction of a method of generating electricity and electrical generator, comprising:

a floating body (20) floating on waves;

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a heavy body (11) elastically supported on said floating body by an elastic member (10) so that a damping force is produced between said floating body and said heavy body with the movement of said heavy body; and

a power generating means (5 & 7) for converting kinetic energy to electric energy;

wherein a spring constant of said elastic member (spring rate) is preset (column 2, lines 63) so that the undamped natural frequency  $\omega_0$  of said elastic member is close to the frequency  $\omega$  of waves which vibrate said floating body within a predetermined range of the ratio  $\omega/\omega_0$ , thereby utilizing resonance (column 2, line 64) of said elastic member with waves.

It would have been obvious to one skilled in the art at the time the invention was made to use a spring or elastic body having a preset spring constant or rate as disclosed by Last et al. for the purpose of allowing the generator to operate optimally within the conditions of the environment for which it was designed.

It would have also been obvious to one having ordinary skill in the art at the time the invention was made to select the undamped natural frequency  $\omega_0$  of said elastic member close to the frequency  $\omega$  of waves which vibrate said floating body within a predetermined range of the ratio  $\omega/\omega_0$ , since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

As to the language on lines 6-10 of claim 1 and 6-9 of claim 2, the Applicant should note that this is merely “result” language which cannot be relied upon to define over Last et al., since

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Last et al. discloses all of the claimed elements and their recited relationships. Moreover, the Examiner will presume that the recited result(s) (“... *so that the undamped natural frequency  $\omega_0$  of said elastic member is close / equal to the frequency  $\omega$  of waves which vibrate said floating body within a predetermined range of the ratio  $\omega/\omega_0$ , thereby utilizing resonance of said elastic member with waves.*”) are inherent in Last et al. since all of the claimed elements and the relationships therebetween are met by Last et al.

5. With regards to claim 2, Last et al. disclose a spring constant of said elastic member being preset so that the undamped natural frequency of said elastic member is equal to the frequency of waves which vibrate said floating body, thereby utilizing resonance of said elastic member with waves.

6. With regards to claim 3, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select a spring or elastic body having variable spring constant and an undamped natural frequency which is adjustable, since it has been held that the provision of adjustability, where needed, involves only routine skill in the art. *In re Stevens*, 101 USPQ 284 (CCPA 1954).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PEDRO J. CUEVAS whose telephone number is (571)272-2021. The examiner can normally be reached on M-F from 9:00 - 6:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quyen Leung can be reached on (571) 272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Pedro J. Cuevas/  
Examiner, Art Unit 2834  
December 5, 2008